

Remarks

Claims 1-4, 6-8, 10-14, and 16-24 were pending in the above-identified application when last examined. Claims 1-4, 6-8, 10-14, and 16-24 are presented for reconsideration and allowance.

Claim Rejection under 35 U.S.C. § 102

Examiner rejected claims 1-4, 7, 10, 13, 14, 16-19, and 21 under 35 U.S.C. 102(b) as being anticipated by Kitajima et al. (US 6,064,358). Applicants respectfully traverse this rejection.

It is axiomatic that “[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(e).

Regarding independent claims 1 and 17, Kitajima et al. do not disclose or teach all the elements in claims 1 and 17. Kitajima et al. do not teach a common drive circuit connected to a common electrode and operable to generate a common drive signal alternating between a second high voltage and a second low voltage differing in voltage by more than a process-limited maximum. In addition, Kitajima et al. do not teach or

suggest pixel drive circuits connected to respective ones of the pixel electrodes and operable to generate respective pixel drive signals alternating between a first high voltage and a first low voltage differing in voltage by less than or equal to a process-limited maximum. No where in Kitajima is it taught or suggested that a process-limited voltage be used with respect to drive signals.

The Examiner on page 2 of the Final Office Action interprets “VDH” of Kitajima [fig. 26(d)] as a process-limited maximum since the value of “VDH” is a limited maximum value of the signal “VD” during driving process. The term, “process-limited” in claims 1 and 17 refers to modern integrated circuit processes (see pg. 3, lines 4-10 of the application) not a driving process.

For at least these reasons, Applicants request reconsideration and withdrawal of the rejection of claims 1 and 17 under 35 U.S.C. § 102(b).

Regarding dependent claims 2 and 18, Kitajima et al. do not disclose or teach all the elements in claims 2 and 18. Kitajima et al. do not teach a first low voltage and a second low voltage differing in voltage by less than or equal to a threshold voltage at which an electro-optical response is produced by an electro-optical material. Kitajima teaches a difference between two signals ($V_{DL}-V_{CL}$) however Kitajima do not teach or suggest that this difference is related to a threshold voltage at which an electro-optical response is produced by an electro-optical material.

The Examiner on page 2 of the Final Office Action states the following:

...it is *inherent* for the display of Kitajima that the voltage difference “VDL-VCL”

being less than or equal to the threshold voltage since if the voltage difference between the lowest voltage of the signal applied to the common electrodes and the lowest voltage of the signal applied to the data electrodes is greater than the threshold voltage, the liquid crystals included in the pixels of the display would be controlled by the voltage difference, and thus the liquid crystals of the display would not control the transmission of the back light at the right timing.
(Emphasis added)

MPEP Section 2112 (IV) sets forth the following regarding inherency:

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)

Applicants respectfully disagree with the Examiner that it is inherent for the display of Kitajima that the voltage difference "VDL-VCL" must be less than or equal to the threshold voltage. The liquid crystals included in the pixels of the display may be controlled by the voltage difference and retain control of the transmission of the back

light with correct timing.

For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 2 and 18 under 35 U.S.C. § 102(b).

Regarding dependent claim 3, Kitajima et al. do not disclose or teach all the elements in claim 3. Kitajima et al. do not teach a first high voltage and a second high voltage differing in voltage by less than or equal to a threshold voltage. Kitajima teaches a difference between two signals ($V_{DH}-V_{CH}$) however Kitajima does not teach or suggest that this difference is related to a threshold voltage.

The Examiner on pages 2 and 3 of the Final Office Action states the following:

...it is *inherent* for the display of Kitajima that the voltage difference “VDH-VCH” being less than or equal to the threshold voltage since if the voltage deference between the highest voltage of the signal applied to the common electrodes and the highest voltage of the signal applied to the data electrodes is greater than the threshold voltage, the liquid crystals included in the pixels of the display would be controlled by the voltage difference, and thus the liquid crystals of the display would not control the transmission of the back light at the right timing.

(Emphasis added)

Applicants respectfully disagree with the Examiner that it is inherent for the display of Kitajima that the voltage difference “VDH-VCH” must be less than or equal to the threshold voltage. The liquid crystals included in the pixels of the display may be controlled by the voltage difference and retain control of the transmission of the back

light with correct timing.

For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. § 102(b).

Dependent claims 4, 7, 10, and 14 further define patentably distinct claim 1. Therefore, dependent claims 4, 7, 10 and 14 are also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 4, 7, 10, and 14 under 35 U.S.C. § 102(b).

Dependent claim 19 further defines patentably distinct claim 17. Therefore, dependent claim 19 is also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 19 under 35 U.S.C. § 102(b).

As to claims 13 and 16, the Examiner states on page 3 of the Final Office Action that other factors might lower the amplitude of the breakdown voltage, but would not make the breakdown voltage to be higher than 1.8 volts. Applicants respectfully disagree.

As discussed above, the mere fact that a certain thing may result from a given set of circumstances is not sufficient. The certain thing must result from a given set of circumstances. In this case, the fact that other factors might lower the amplitude of the breakdown voltage is insufficient to read on claims 13 and 16.

For at least this reason, Applicants request reconsideration and withdrawal of the

rejection of claims 13 and 16 under 35 U.S.C. § 102(b).

Dependent claim 21 further defines patentably distinct claim 17. Therefore, dependent claim 21 is also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 21 under 35 U.S.C. § 102(b).

Claim Rejection under 35 U.S.C. § 103

Examiner rejected claims 8, 11, 20, and 22 under U.S.C. 103(a) as being unpatentable over Kitajima. Applicants respectfully traverse this rejection.

Dependent claims 8 and 11 further define patentably distinct claim 1. Therefore, dependent claims 8 and 11 are also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 8 and 11 under 35 U.S.C. § 103(a).

Dependent claims 20 and 22 further define patentably distinct claim 17. Therefore, dependent claims 20 and 22 are also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 20 and 22 under 35 U.S.C. § 103(a).

Examiner rejected claims 12, 23, and 24 under U.S.C. 103(a) as being unpatentable over Kitajima in view of Kawaguchi et al. (US 6,677,925). Applicants respectfully traverse this rejection.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). In addressing obviousness determinations under 35 U.S.C. § 103, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, No. 04-1350 (April 30, 2007), reaffirmed many of its precedents relating to obviousness including its holding in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In *Graham*, the Court set out an objective analysis for applying the statutory language of §103:

Under §103, the scope and content of the prior art are to be determined, differences between the prior art and the claims at issue are to be ascertained, and the level of ordinary skill in the pertinent art are to be resolved. Against this background the obviousness or non-obviousness of the subject matter is to be determined. Such secondary considerations as commercial success, long-felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. *KSR, slip op.* at 2 (citing *Graham*, 383 U.S. at 17-18).

In *KSR*, the Court also reaffirmed that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* at 14. In this regard, the *KSR* court stated that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new

invention does ... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *Id.* at 14-15. Traditionally, to establish a *prima facie* case of obviousness, the CCPA and the Federal Circuit have required that the prior art not only include all of the claimed elements, but also some teaching, suggestion, or motivation to combine the known elements in the same manner set forth in the claim at issue. See, e.g., *ASC Hospital Systems Inc. v. Montifiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (holding that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination.); *In re Mills*, 16 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 1990) (holding that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination). In *KSR*, the court noted that the demonstration of a teaching, suggestion, or motivation to combine provides a “helpful insight” in determining whether claimed subject matter is obvious. *KSR*, *slip op.* at 14. However, the court rejected a *rigid* application of the “TSM” test. *Id.* at 11. In this regard, the court stated:

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and explicit content of issued patents. The diversity of inventive pursuit and of modern technology counsels

against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. *Id.* at 15.

In other words, the *KSR* court rejected a rigid application of the TSM test which requires that a teaching, suggestion or motivation to combine elements in a particular manner must be explicitly found in the cited prior art. Instead, the *KSR* court favored a more expansive view of the sources of evidence that may be considered in determining an apparent reason to combine known elements by stating:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art all in order to determine whether there was an apparent reason to combine in the known elements in the fashion claimed in the patent at issue. *Id.* at 14.

The *KSR* court also noted that there is not necessarily an inconsistency between the idea underlying the TSM test and the *Graham* analysis, and it further stated that the broader application of the TSM test found in certain Federal Circuit decisions appears to be consistent with *Graham*. *Id.* at 17-18 (citing *DyStar Textilfarben GmbH and Co. v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (2006) (“Our suggestion test is in actuality quite flexible and not only permits but *requires* consideration of common knowledge

and common sense”); *Alza Corp. v. Mylan Labs, Inc.*, 464 F.3d 1286, 1291 (2006) (“There is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art. We do not have a rigid test that requires a teaching to combine ...”).

Furthermore, the *KSR* court did not diminish the requirement for objective evidence of obviousness. *Id.* at 14 (“To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”); see also, *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002) (holding that the factual inquiry whether to combine references must be thorough and searching, and that it must be based on *objective evidence of record*).

When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination.

Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). The Federal Circuit has warned that the Examiner must not, “fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.” *In re Dembiczak*, F.3d 994, 999, 50 U.S.P.Q.2d 52 (Fed. Cir. 1999) (quoting *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983)).

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); see M.P.E.P. § 2143.01(VI). If the proposed modification or combination would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); see M.P.E.P. § 2143.01(V).

It appears that the Examiner's statement above is based solely on hindsight derived from applicants' specification. For at least the above reasons, Applicants request reconsideration and withdrawal of the rejection of claims 12 and 23 under 35

U.S.C. § 103(a).

Examiner rejected claim 24 under U.S.C. 103(a) as being unpatentable over Kitajima in view of Kawaguchi et al. (US 6,677,925). Applicants respectfully traverse this rejection.

Dependent claim 24 further defines patentably distinct claim 17. Therefore, dependent claim 24 is also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 24 under 35 U.S.C. § 103(a).

Allowable Subject Matter

Applicant appreciates the Examiner's indication that claim 6 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In that it is believed that every rejection has been overcome, it is respectfully submitted that each of the claims that remain in the case is presently in condition for allowance.

Conclusion

Applicants respectfully submit that Applicants' pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby requested.

Respectfully submitted,

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